

FISHES OF THE GENUS *HOMALOPTERA* VAN HASSELT, 1823 IN KERALA,
WITH DESCRIPTION OF A NEW SPECIES *HOMALOPTERA SILASI*

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A new Homalopterid fish, *Homaloptera silasi* is described based on five specimens collected from Kattamadithode, a small stream connecting with Periyar river in Periyar Tiger Reserve at Chokkanpetty. The morphometric characters of the species were found varied when compared to all other known species of the Genus *Homaloptera* and is described here as a new species.

Key words: *Homaloptera silasi* sp. nov., Kattamadithode, Periyar Tiger Reserve, Chokkanpetty, Periyar river, Kerala

Homalopterine loaches inhabit fast flowing water of hill streams, and are characterized by a flattened head and body, horizontally oriented, enlarged, paired fins bearing adhesive pads covered with unculi on the ventral surface, that helps them to live in mountain streams and rivulets (Kottelat 1989). The genus *Homaloptera* van Hasselt is represented by four species in the Indian subcontinent, namely *Homaloptera bilineata* Blyth, *H. modesta* (Vinciguerra), *H. rupicola* (Prashad & Mukerji), which are distributed in Burma (=Myanmar), and *Homaloptera montana* Herre, found in Silent Valley and New Amarambalam area of Western Ghats (Menon 1987). Indra and Rema Devi (1981) described a new species, *Homaloptera pillaii* from Silent Valley, while Shaji and Easa (1995) described *Homaloptera menoni* from Siruvani area of Bhavani river. Arunkumar (1999) described a new species from Manipur, *Homaloptera manipurensis*. Recently, Arunachalam *et al.* (2002) added a new species, *Homaloptera santhamparaiensis* from the Panniyar tributary of Periyar river at Santhamparai. The present discovery of a new species of the genus *Homaloptera* is from Kattamadithode, a small stream joining Periyar river at Chokkanpetty area of Periyar Tiger Reserve.

MATERIAL AND METHODS

Morphometric measurements were recorded with a dial calliper to the nearest millimetre and expressed as percent of standard length. Meristics were counted following Talwar and Jhingran (1991).

Homaloptera silasi sp. nov. (Fig. 1)

Holotype: Deposited in ZSI, Calicut, no. ZSI/WGRS/CLT/V/F 13118. 67.92 mm TL, Chokkanpetty, Periyar Tiger Reserve, 12.ii.2004, Coll. Dr. K.V. Radhakrishnan.

Paratypes: 2 exs. Deposited in ZSI, Calicut, no. ZSI/WGRS/CLT/V/F 13118a & b, 49.70 mm, 51.26 mm TL, Chokkanpetty, Periyar Tiger Reserve, 12.ii.2004, Coll. Dr. K.V. Radhakrishnan.

Diagnosis: An elongate fish with a sub-cylindrical body. Head depressed, eyes small, narrowly elongated snout, dorsal fin inserted close to the base of caudal fin than the tip of snout, small pectoral fins, height less than length of head and not reaching pelvic fins, pelvic fins small, not reaching vent or anal fin, 89 to 93 lateral line scales, caudal peduncle short and stout, and its least depth less than two times its length.

Description: Based on 5 specimens collected from Kattamadithode, Chokkanpetty, Periyar Tiger Reserve, ranging from 40.18 to 67.92 mm SL (Mean value in parentheses).

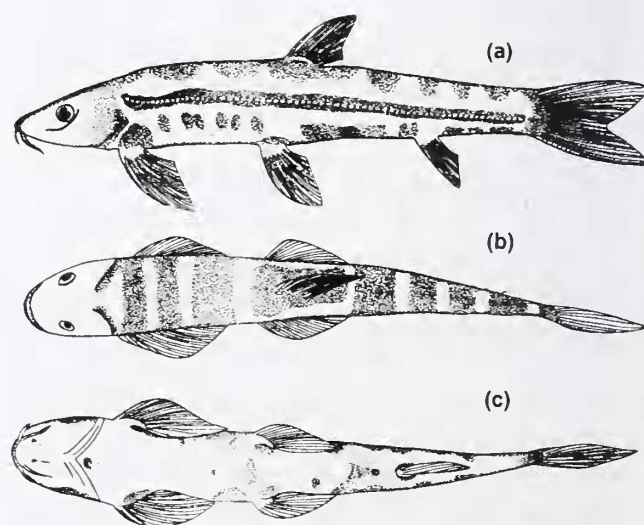


Fig. 1: *Homaloptera silasi* sp. nov. (a) lateral, (b) dorsal, (c) ventral view

NEW DESCRIPTION

Table 1: Comparison of *Homaloptera silasi* sp.nov. with closely related species

Character	<i>H. silasi</i>	<i>H. pillaii</i>	<i>H. montana</i>	<i>H. menoni</i>	<i>H. manipurensis</i>	<i>H. santhamparaiensis</i>
Lateral line scales	89-93	83-93	70-72	59-62	42-43	88-95
Insertion of Dorsal fin	Close to the caudal base than to the snout	Equidistant between the snout and caudal fin	Equidistant between the snout and caudal fin	Close to the snout than the caudal fin	Close to the caudal base than to the snout	Close to the caudal base than to the snout
Colour pattern on body and fins	Irregular brown blotches or bands on back, a dark brown lateral streak, fins dusky, caudal base has a dark band	Body light to dark brown mottled with numerous black spots. Fins are dusky brown	Ten dark short bars on back, an ill-defined band below lateral line, caudal fin with black blotch at tips	Irregular blotches on the back. The dorsal, ventral and anal fins have two rows of spots	Six black and broad bands from occiput to the base of caudal fin, rows of varying number of black bands on the fins	Body uniform dark brown, Belly pale white. Dorsal marked with 8-9 dark indistinct brown blotches. Fins dusky white, rays dark brown
No. of rays on pectoral	5/9	7-9/11-13	4/8	5/9	5/10	4/10
% Length of pectoral fin in head length	86.81%	89.2%-104.9%	98.2%	92.14%	88.62%	66.8%-84.6%
% of body depth in standard length	15.46%	14.33%	13.70%	13.94%	12.25%	15%-19%
% of Eye diameter in head length	8.26%	15.02%	22.22%	30.33%	15.38%	13.3%-20%
% of height of caudal peduncle in its length	63.48%	73.18%	72.14%	30%	57.14%	62.5%-83.3%
Shape of caudal fin	Slightly emarginate	Emarginate	Truncate	Slightly emarginate	Forked	Emarginate

D.I. 8; P.V. 9; V.H. 8; A.I. 6; C.19; L.1. 89-93.

Body: Body sub-cylindrical and covered with scales except on the ventral surface. Body depth 14.31-17.62% (15.46%) in SL. Maximum width of the body 83.74-102.06% (92.05%) in maximum depth of the body. Depth of the body 49.02-71.93% (54.44%) in HL. Lateral line complete with 89-93 scales. Scales small imbricate, covering the whole body except head and ventral profile.

Head: Head depressed, snout elongated and broadly pointed. Length 49.80-58.26% (54.56%) in SL, width 67.01-72.51% (69.86%) in HL. Eyes small and placed in the middle

of the head, not visible from ventral surface of head, is 7.76-9.84% (8.26%) of HL and 22.62-60.61% (41.70%) of interorbital distance. Snout 38.27-47.36% (42.85%) of HL and 92.44-105.90% (99.78%) of post orbital distance. Interorbital distance 34.32-41.31% (37.73%) of HL.

Fins: Dorsal fin situated just behind the origin of pelvic fin and its origin closer to the base of caudal fin than to the snout tip. Predorsal length 49.80-58.26% (54.56%) in SL and 108-114% (112.22%) in post dorsal length. The length of dorsal fin 70.84-84.21% (77.82%) in HL, and 18.05-20.63% (19.14%) in SL. Pectoral fins not reaching pelvics, its length

19.58-22.16% (21.37%) in SL and 106.71-118.97% (111.75%) in height of dorsal fin. It forms 80.03-92.55% (86.81%) in HL. Pelvic fins short and not reaching the vent or anal fin. Length of ventral fins 77.14-85.57% (81.25%) in the length of pectoral fin and 64.40-79.19% (70.55%) of head length. Anal fins shorter than pectoral and pelvic fins and 42.54-68.63% (56.29%) in head length and 11.70-16.47% (13.87%) in standard length. Vent situated close to the origin of anal fin. The distance from vent to anal fin 12.14-17.90% (15.17%) in the distance between the origin of pelvic fin and anal fin. Caudal peduncle short and stout and its length 13.72-17.53% (15.56%) in standard length and 58.70-71.54% (63.12%) in head length. Its least height 54.58-70.63% (63.48%) in its length.

Coloration: Ground colour pale yellowish-green, dorsal with irregular brown blotches. Area below the lateral line and a small region on the ventral surface has blackish brown patches. Head is mottled with irregular brown blotches, which sometimes coalesce to form a uniform brown patch. A dark longitudinal stripe passes from behind the opercle to the caudal peduncle. Fins are generally dusky with blackish patches. Bases of the paired and unpaired fins are marked by darkish brown spot or band, which in the case of caudal fin have a well-defined deep brown to black transverse band at caudal base.

Distribution: INDIA: Kerala, Chokkanpetty in Periyar Tiger Reserve.

Etymology: Named after Dr. E.G. Silas, a renowned fishery scientist who has made outstanding contributions to the taxonomy of freshwater fishes of Western Ghats.

Other material examined: *Homaloptera pillaii* ZSI/SRS F462, Holotype, 69 mm, Silent Valley, river Kunthi, Kerala; ZSI/SRS F 463, Paratypes, 2 examples, 49-57 mm SL, Sayvala, New Amarambalam, Kerala; *H. santhamparaiensis*: ZSI/SRS F 5322, Holotype, 6.1 mm SL, Santhamparai, Panniyar stream of Periyar, Kerala; ZSI/SRS 5323, Paratype, 45 mm SL, Santhamparai, Panniyar stream of Periyar, Kerala.

Remarks: The new species, *Homaloptera silasi*, can

be differentiated from other closely related species such as *H. montana*, *H. pillaii*, *H. menoni* and *H. manipurensis* by an array of characters such as position of insertion of dorsal fin, small eyes, small pectoral and pelvic fins and characteristic colour pattern. The new species show some similarity with *H. santhamparaiensis* in the lateral line scale counts and also in the smaller eyes, but disagrees in the shape of head and snout and pectoral fin counts. The new species described is compared with the closely related species and the results are summarized in Table 1.

KEY TO THE SPECIES OF *HOMALOPTERA* VAN HASSELT REPORTED FROM KERALA

1. Origin of dorsal fin equidistant or nearer snout than caudal 2
- Origin of dorsal fin towards the caudal than the snout tip 3
2. Origin of dorsal fin close to snout *H. menoni*
- Origin of dorsal fin equidistant between snout and caudal fin 4
3. Body with a distinct dark lateral band along lateral line, unbranched pectoral fin rays 5 *H. silasi* sp. nov.
- Body without any lateral bands along lateral line, unbranched pectoral fin rays 4 *H. santhamparaiensis*
4. Lateral line scales 70-72 *H. montana*
- Lateral line scales 83-93 *H. pillaii*

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